F. Mason Sones, Jr., M.D.
1919–1985

In Memoriam

F. Mason Sones, Jr., M.D.

On August 29, F. Mason Sones, Jr. died of lung cancer at his home. He was only 66. Justifiably called the "father of modern cardiology," Sones revolutionized the course of coronary artery medicine and surgery by proving that coronary visualization could, and should, be done.

Attempts to opacify the coronary arteries were being pursued in a number of laboratories throughout the United States in the mid 1950s. Conventional medical wisdom held that it was impossible to invade the arteries of the human heart with a catheter and dyes to photograph their configurations without killing the patient. In 1958, however, an event occurred that was destined to have virtually unparalleled influence on medicine's understanding of coronary artery disease.

In a basement laboratory at the Cleveland Clinic Hospital, Sones filmed the first coronary arteriogram. The discovery that dye could be safely injected into the coronary arteries, when it came, seemed like a happy accident. But that denies the years of research that preceded it. Not to mention the work that followed.

Although injection of contrast medium through a catheter into the heart was a proven technique, cardiologists feared that nonoxygenated contrast medium in the coronary arteries would cause fatal ventricular fibrillation. Then, in 1958, a large amount of medium was accidentally injected into a patients's right coronary artery. No fibrillation. Later, Sones was to use a special catheter to inject far smaller amounts, and the remote possibility of fibrillation was largely overcome by external defibrillation.

On the superior diagnostic accuracy of the technique, Sones was to comment: "Clinical acumen and indirect information are not as good as 30 feet of motion picture film. For the surgeon, the obstruction is pinpointed, and he is handed a road map to work by."

For the first time, doctors were able to see and photograph the arteries which carry blood to the heart muscle. They now had a way not only to accurately identify people suspected of having coronary disease but a literal diagram of the individual patient's blood supply, with obstructions clearly visible.

Sones' technique, a linking of cardiac catheterization, fluoroscopy and motion-picture making used to visualize, record and analyze the rapid circulatory movements in the heart and coronary arteries was *a*, if not *the*, most important advance in cardiology in the 20th century. Cinecoronary arteriography is now standard throughout the world, providing the basis for assessing the value of surgery or other kinds of treatment.

"Without the work of Dr. Mason Sones, Jr. — the most important contributor to modern cardiology — all our efforts in myocardial revascularization would have been fruitless," said pioneer cadiovascular surgeon Dr. René G. Favaloro of Argentina.

Sones was also driven by an insatiable itch for perfection. "It's not good enough," was his constant complaint. He had been fooled too often by the imperfect tools of the time. To find better tools, he taught himself the language of video engineering, the chemistry of contrast media, the physics of optics and image amplification. He learned more about radiology than most radiologists knew. By teaching himself, he was able to communicate his needs to engineers.

As quickly as Sones learned, he also taught. He had an amazing ability to inspire others to do what they were certain could not be done. And he willingly shared what he knew.

Despite a bluntness that sometimes exasperated colleagues, Sones was never irritable with patients. He loved his patients and they loved him back.

Sones' career began at the University of Maryland, where he earned his M.D. degree in 1943. After service in the U.S. Army Air Force in the Pacific, he became a resident at Henry Ford Hospital in Detroit. In 1950, he

joined the Cleveland Cinic Foundation in Ohio where, until his death, he served successively as director of the Cardiac Laboratory and Pediatric Cardiology, director of the Department of Cardiovasular Disease and Senior Physician. He was a founder of the Socety of Cardiac Angiography.

Sones received many honors in his lifetime including, more recently, the Galen Medal of the Worshipful Society of Apothecaries of London for defining the needs of the individual patient and bringing forth the present era of revascularization surgery. He was the author of many outstanding publications. Sones held professional memberships in numerous organizations and, from 1968 to 1977, was national consultant in cardiovascular diseases to the surgeon general of the U.S. Air Force.

In 1973, Sones was given the Texas Heart Institute's highest honors: the Ray C. Fish Award and THI Medal of honor for his outstanding contributions in the field of coronary angiography.

Thirty years ago, there were no diagnostic techniques for pinpointing coronary artery disease. Sones' breakthrough changed this and thus the course of medical history. Millions of patients have benefited from his discovery — all diagnosed and treated by means of arteriographic guidance.

We owe Sones great recognition for his medical achievements, which serve as the foundation for most of our current knowledge of coronary artery disease and its present treatments. Cardiologists and surgeons from all over the world owe him a great debt. I am among them.

Robert J. Hall, M.D.
Editor